

REMARKS/DISCUSSION OF ISSUES

The Examiner's acceptance of the drawings, acknowledgement of receipt of the claim for priority and receipt of the certified copies is acknowledged with appreciation.

Claims 1-8 are pending in the application. Claims 1-8 are objected to and rejected.

Claims 1-8 are objected to in that the structural limitations conveyed by the intended use language in their preambles are unclear.

Claims 1 and 6 are currently amended to provide structural limitations in their preambles, thereby clarifying the language of the preambles. Support for these limitations may be found, for example, at: page 3, line 10; page 5, lines 9 and 32; and page 6, lines 9, 20, 25, 27 and 33 of Applicant's specification.

Accordingly, the objection to claims 1-8 has been overcome and should be withdrawn.

Claims 1-4, 6 and 7 are rejected under 35 USC 103(a) as being unpatentable over newly cited Hertz et al. (U.S. patent 6,002,744) (herein 'Hertz') in view of Noda et al. (U.S. patent 4,723,262) (herein 'Noda')..

Hertz discloses a method and apparatus for generating X-rays in which a pulsed laser beam is focused on a target in the form of a jet of liquid.

Hertz is a continuation of application no. PCT/SE97/000697, discussed in the background section of Applicant's specification. As noted in this discussion, generating X-rays by way of pulsed laser plasma emission has a number of drawbacks, and these drawbacks are avoided in the

invention by providing an X-ray source employing a beam of electrically charged particles instead of a laser beam.

The Examiner aims to cure this defect of Hertz by citing Noda for the teaching that an electron beam can be used instead of a laser beam to impinge a fluid target to produce X-rays, citing col. 6, lines 26-36.

However, Noda's fluid target comprises a series of discontinuous droplets of liquid, not a continuous stream or jet of liquid. See, e.g., col. 1, line 27 and Figs. 1 and 5.

Hertz liquid target is a continuous stream or jet. However, Hertz stream or jet is forced through a nozzle and has essentially the same diameter as the nozzle. See col. 4, lines 9-13. Thus, the jet has a circular cross-section, not a curvilinear cross-section, as claimed by Applicant.

The meaning of the term 'curvilinear' is clearly set forth in Applicant's specification, as explained in Applicant's prior responses, including APPELLANT'S BRIEF, filed 1 December 2004.

Neither Hertz nor Noda teach or suggest a target in the form of a stream with a curvilinear cross-section. On the contrary, both references teach a different shape of target, and therefore both teach away from Applicant's claimed invention.

The rejection is therefore in error and should be withdrawn.

Claim 5 is rejected under 35 USC 103(a) as being unpatentable over Hertz in view of Noda as applied above, and further in view of previously applied Wang and Iketaki.

Wang discloses an X-ray microscope (Fig. 1) having an electron beam (9) produced by an electron gun (3) and X-rays produced by impingement of beam (9) on a foil target (12) adjacent to a sample (14).

Wang fails to disclose an electron gun from a cathode ray tube, or a fluid target or a condenser lens between the target and the sample, as called for by claim 5.

Iketaki discloses an x-ray microscope (Fig. 7) including a source (21-23), a sample (27) and a condenser lens (24) between the source and the sample. However, the source comprises a source of laser radiation (21) and a target (23) positioned upstream of the sample (27).

Since Wang and Iketaki use different sources to generate X-rays, and thus position the targets differently, the teachings of the two references are incompatible.

Specifically, Wang uses an electron gun as a source of an electron beam, and positions the target (12) adjacent to the sample (14). Thus, there is no need for a condenser lens between the target and the sample.

Iketaki uses a laser beam and a target positioned upstream of the sample, so that a condenser lens is needed to focus the beam from the target onto the sample.

The skilled artisan would therefore not be led to insert a condenser lens between the target and sample of Wang in view of the teachings of Iketaki.

Accordingly, the rejection of claim 5 is in error and should be withdrawn.

Claim 8 is rejected under 35 USC 103(a) as being unpatentable over Hertz in view of Noda as applied above, and further in view of Wang.

Wang discloses a scanning X-ray microscope, not a scanning electron microscope, as called for by claim 8. Moreover, Wang's microscope uses a foil target, not a fluid target, as also called for by claim 8, by virtue of its dependence on claim 6.

Iketaki does not disclose a source of charged particles of any kind, but rather discloses a source of laser radiation (21).

Accordingly, the rejection is in error and should be withdrawn.

In conclusion, Applicant respectfully requests that the Examiner withdraw the objection and rejections of record, allow all the pending claims, and find the application to be in condition for allowance.

Respectfully submitted,



John C. Fox, Reg. 24,975
Consulting Patent Attorney
203-329-6584